EUROPEAN CLIMATE, INFRASTRUCTURE AND ENVIRONMENT EXECUTIVE AGENCY (CINEA)

CINEA.D - Natural resources, climate, sustainable blue economy and clean energy
D.3 - Sustainable Blue Economy

Synergies and Clustering between Maritime Projects (EASME/EMFF/2020/3.1.12) – SI2.850620

"Workshop on Offshore Renewable Energy"

Background document

Dear Participant,

This background document aims to expand on the context of the workshop on offshore renewable energy that will take place on 4 October 2022 at 10:00 CET. We suggest you have a quick look at it to have a better idea about what to expect and whom to meet during the workshop.

If you are a project beneficiary, we would very much appreciate if you could complete a short survey on your project: https://ec.europa.eu/eusurvey/runner/preworkshopsurvey. Your feedback will inform the breakout discussion in the second session of the workshop.

EU funding for offshore renewables

There is a big variety of EU funding programmes to finance energy projects, those particularly relevant for offshore renewable energy (wind and ocean) are available at this link, as well as in a document which provides an overview of the various instruments, which is updated regularly. For each programme listed, there is also information about eligible investments, previously funded offshore projects and how different EU programmes can be combined.

As a general rule, when combining multiple EU funding instruments, state aid rules apply and double funding of the same elements within one project is not possible (meaning that the co-financing rate exceeds 100%).

List of ORE projects

Below you can find a list of the offshore renewable energy projects that will join the workshop:

Aerones

Project: Offshore Robotic Blade Care System

Project duration: 01/10/020 – 30/09/2023

Overall budget: 2.494.460 €

The wind turbine market is growing rapidly and will remain a key renewable energy option in the coming decades. It is encouraged by following: the growing global energy demand; decline of average installed costs

for offshore wind turbines; and the zero-pollution emission goal legitimated in EU Green Deal. Currently offshore wind turbine maintenance services are provided with rope access. The turbine is stopped for a few days and all this time vessels are involved. As a result, O&M service is time and resource expensive, and produces significant amounts of CO2 emissions. The aim of the project is to develop robotic offshore wind turbine maintenance system up to level TRL8. Aerones has developed robotic onshore wind turbine maintenance system up to the commercialization stage. Together with a consortium and in-kind contributors within the project offshore robotic systems' prototype will be developed, and set of testings will be made. As a result, an offshore wind turbine maintenance service will become less resource intensive. It won't require rope access and will be manageable remotely, therefore raising a significant security level for workers. The maintenance service will be provided 3 to 6 times faster than the current solutions; therefore, turbine will be stopped for less time and income loss will be reduced significantly. The service also will be less expensive therefore inspections will be available more often. Those early stage inspections will prevent wind turbine blades from progressing to serious damage where produced energy drops by 30% or turbine even stops. Therefore, efficiency of the wind turbine will increase and its lifetime will prolong. Technology has a significant impact on reduction of CO2 (up to 6 400 000 t of CO2 emissions yearly), reduction of marine pollution (up to 37% in 5 years) while the blue economy is thriving, therefore getting closer to goals set in the international strategies.

ATOMS

Project: AUXILIARY TOWABLE OPERATION AND MAINTENANCE SYSTEM FOR OFFSHORE WIND TOWERS

Project duration: 01/09/2020 - 30/06/2023

Overall budget: 3.545.109 €

OPEX accounts for approximately 30% of the cost of offshore wind energy and is thus a critical factor in the path to further reducing the cost of this strategic energy source. Nearly half of this OPEX is dedicated to paying for the large jack-up vessels that are, as of today, the only option to perform any so called Large Corrective Maintenance (LCM) interventions, dealing with the replacement and handling of major components of offshore wind turbines. ATOMS (Attachable Towable O&M System) project will complete the development, prototype, certification and fully demonstration in real operative offshore conditions of a pioneer technology for turbines' Large Corrective Maintenance actions which will -for the first time- scape the monopoly of jack-up vessels and will drastically reduce the maintenance cost of bottom-fixed wind turbines. What is more, ATOMS shall demonstrate and provide a simple and yet breakthrough solution to one of the key unsolved technological challenges for the future of the offshore wind sector: how to perform on-site Large Corrective Maintenance operations in floating wind turbines. Not only will our solution slash to nearly 1/5 the costs currently dedicated to jack-up services for the maintenance of bottom-fixed turbines, resulting in a 35% reduction in current OPEX but it will also fill the technological gap existing in floating offshore market when dealing with LCM actions. At last but not least, the ATOMS project will also have a measurable impact on employability and environment. On the one hand, ATOMS' considerably sophisticated yet simple solution is expected to positively impact local economy growth both through direct hiring and indirect spending. On the other hand, its environmental impact will be much lower when compared to existing solutions by reducing CO2 emissions and seabed conditions, without affecting marine flora and fauna by not needing to be supported on the seabed as conventional O&M jack up vessels.

COREWIND

Project: COst REduction and increase performance of floating WIND technology

Project duration: 01/09/2019 – 28/02/2023

Overall budget: 5 031 858,75 €

The COREWIND project aims at achieving significant cost reductions and enhancing performance of floating wind technology through the research and the optimisation of mooring and anchoring systems and dynamic cables.

These enhancements will be validated by means of simulations and experimental testing in both wave basin tanks and wind tunnel by taking as reference two concrete-based floater concepts (semi-submersible and spar) supporting large wind turbines (15 MW), installed at water depths greater than 40 m and 90 m, respectively. Special focus is given to development and validation of innovative solutions to improve installation techniques and operation and maintenance (O&M) activities. The project aims at proving the benefits of concrete structures to obtain an LCOE reduction of at least 15% compared to bottom-fixed offshore wind.

The project provides guidelines and best design practices, as well as open data models to accelerate the development of concrete-based semi-submersible and spar floating offshore wind turbines (FOWTs). The resulting recommendations are expected to facilitate the development of floating offshore wind energy, reducing risks and uncertainties and contributing to lower LCOE estimates.

COREWIND aims at strengthening the European Leadership on wind power technology (especially floating), and it will contribute to speeding up the increase of cost-competiveness of floating offshore wind, making this a viable technology for a prompt use.

DOCC-OFF

Project: Digitalization Of Critical Components in OFFshore wind turbines

Project duration: 01/11/2019 - 31/10/2021

Overall budget: 1.001.736 €

The main objectives of this proposal are to optimize the design, increase the performance rates and reduce the maintenance costs of critical components in offshore wind turbines, through the digitalization of specific critical components. Wind turbine OEMs and some components manufacturers have already started to implement sensors and data collection systems in the wind turbines they are providing and installing. However, efficient proven concepts have not been demonstrated yet, due to two main gaps or challenges to be overcome: - The technological gap: significant technology development and validation is still needed to achieve new products and services ready for commercialization. Sensors and remote monitoring systems are yet to be extensively implemented in offshore energy generation facilities, as they currently provide little information that may be used in advance to any incident. - The data access gap: access to the data collected from the wind energy turbines in operation is limited only to windfarm developers and OEMs. Therefore, most European components suppliers cannot obtain, manage, analyze and learn from the performance data produced by their components in real-life operation, missing that way the opportunity to improve their competitiveness and increase the added-value of the products. DOCC-OFF focuses on addressing the technology gap in the pitch system digitalization and the real data availability for a reliable validation and

demonstration process. Hence, the main challenge of the project will be to implement, validate and demonstrate sensors, remote monitoring system and big data analytics tools that will allow to obtain data from those critical components and to extract value out of them in order to deliver the defined objectives. The results of the project will have a relevant impact on the improvement of competitiveness of the DOCC-OFF partners, making offshore wind a competitive technology between other power generation alternatives.

ENTROPI

Project: Enabling Technologies and Roadmaps for Offshore Platform Innovation.

Project duration: 01/04/2017 - 31/03/2019

Overall budget: 743.890 €

The project aims to advance Key Enabling Technologies (KETs) along the value chain to accelerate the deployment of multi-use offshore platforms, particularly for renewables and aquaculture. Focusing on the Atlantic sea basin, the project will develop the investment case for 3 bankable demonstration projects, each supported by a public-private partnership.

FleetUSV

Project: Future of the Ocean Data Collection Market: Commercialisation of the novel Low-cost, Efficient, High-performing Autonomous Unmanned Surface Vessel

Project duration: 01/09/2020 - 31/08/2022

Overall budget: 2.442.061 €

The objective of FLEETUSV project is to bring to market XOCEAN's innovative, high-performing, low-cost Unmanned Surface Vessel (USV) aimed at the commercial ocean data collection sector. The XOCEAN USV removes the risk to human life and reduces carbon emissions (1,000 times reductions). XOCEAN will be the first company to commercialise and serially manufacture commercial USVs at scale and at significantly reduced cost (-66%). XOCEAN has already gained traction with target customers such as SSE (Offshore Wind), Diamond Transmission (Offshore Wind Transmission Assets), the UK Marine and Coastguard Agency (Coastal bathymetric surveying) and the Irish Marine Institute (Fisheries Surveys). To date the founders of XOCEAN have invested €2.2 million and raised another €4.7 million in equity in October 2019. EMFF will enable the product market launch in Europe, the US and Canada by July 2022 resulting in €242 million revenue and 1,012 direct and indirect/induced jobs in 3 years.

FLORA

Project: FLORA FlOating RAdar

Project duration: 01/06/2022 - 31/05/2024

Overall budget: 1.414.543 €

The FLORA project will develop an industrial-scale prototype of a multi-purpose ocean station with renewable energy generation and operational oceanography capabilities: the FLORA Ocean Station.

Equipped with a novel sensor suite, the FLORA O.S. will be deployable as a low environmental impact system for bird and biodiversity data acquisition at sea. As an automated data acquisition tool, the FLORA O.S. will accelerate oceanic multi-use by eliminating much of random sampling, estimation, and extrapolation in

which modern Environmental Impact Assessments (EIAs) are largely rooted. The 2-year project will demonstrate the prototype in a real environment and aims for TRL 7.

FreShER

Project: Floating Solar Energy mooRing: Innovative mooring solutions for floating solar energy

Project duration: 01/11/2019 - 30/09/2022

Overall budget: 1.091.402 €

Floating solar photovoltaic (PV) installations open new opportunities for scaling up solar generating capacity, especially in countries with high population density and competing uses for available land. Solar power dropped in price between 2009 and 2017 by almost 85% (price per Watt when using solar panels dropped from $2.60/W to $0.40/W), While the majority of the installations has happened in Japan, India, China and the US, the market in Europe is expected to grow. (Feldman & Margolis, 2018) According to the relevant World Bank report (World Bank, 2018), there are challenges related to the technical complexity of designing, building, and operating solar power on and in water. Areas highlighted in the report are especially electrical safety, anchoring and mooring issues, and operation and maintenance and its related costs. • Demonstrate an innovative mooring solution in a full-scale floating PV park that is 50% more cost efficient compared to standard solutions making the floating solar parks more sustainable with eased manufacturing and installation, as well as lower the transport and maintenance needs. • Increase TRL levels for the solutions from TRL6 to TRL8 to make the product roll-out for the involved companies feasible. • Increase knowledge on motions and loads on the moorings of a floating solar park, weather impact, maintenance requirements, etc. to enable further improvements of the moorings and anchoring of floating solar parks and extend application to near-shore installations. • Reduce risks when planning and executing projects due to more certainty on technical challenges and lifetime. The project is an industry-driven innovation and demonstration project led by a core partner in the value chain, closely linked to the demands of the end-customer and supported by a research institute to monitor, validate and verify the results achieved. The marine energy industry has a need for cost-effective solutions for mooring and anchoring infrastructure.

LEAPWind

Project: LEAPWind: Leading Edge Advanced Protection using novel thermoplastic materials and processes for offshore Wind turbine blades

Project duration: 01/01/2019 - 31/12/2020

Overall budget: 1.520.103 €

The aim of LEAPWind is to produce a new commercial leading-edge blade component using advanced composite materials and innovative manufacturing processes.

Objectives: (i) to develop a commercial-scale process for manufacturing ÉireComposites's leading-edge wind-blade component; (ii) to de-risk the technology by performing physical (structural and rain erosion) testing of a full-scale prototype leading-edge blade component; (iii) to perform full-scale operational tests on an existing wind turbine in Portugal. Advanced sensory structural health monitoring techniques will be employed to accurately assess the performance of the novel leading-edge blade component and demonstrate an increase in TRL from 6 to 9; (iv) to introduce the novel leading-edge blade component to the offshore wind energy market in order to ensure its viability as a commercial product through interactions

with SUZLON and other developers and market leaders; (v) lower the levelized cost of wind energy by 10% by decreasing risk, increasing productivity and reducing maintenance costs by 20% resulting in improved investor confidence and better access to capital.

NeSSIE

Project: North Sea Solutions for Innovation in Corrosion for Energy

Project duration: 01/05/2017 - 30/04/2019

Overall budget: 845.855 €

The project seeks to deliver new business and investment opportunities in corrosion solutions and new materials for offshore energy installations. The project aims to draw on North Sea region expertise in traditional offshore sectors (i.e. oil and gas, shipbuilding) in order to develop solutions for emerging opportunities in offshore renewable energy sources (wave, tidal and offshore wind energy).

OCEaN

Project: The Offshore Coalition for Energy and Nature

Project duration:

Overall budget:

The Offshore Coalition for Energy and Nature (OCEaN) consists of 26 organisations from across Europe, bringing together NGOs, TSOs and the wind industry. Together they work towards a sustainable development of offshore energy infrastructure that protects our marine ecosystems.

OCEaN provides an open forum for discussion, where existing information and experiences are assessed and collated, needs for further research are identified and suggestions are made on how to improve planning offshore wind development for the European seas.

SAFEWave

Project: Streamlining the Assessment of environmental efFEcts of WAVE energy

Project duration: 01/10/2020 - 30/09/2023

Overall budget: 1.893.370 €

The nascent status of the Marine Renewable Energy (MRE) sector, particularly ocean wave energy (WE), yields many unknowns about its potential environmental pressures and impacts and is still perceived by regulators and other stakeholders as risky and also can evoke opposition within intended host communities resulting in a main obstacle to the consenting procedures of ocean WE projects due to the environmental uncertainty, the need to consult with numerous stakeholders and potential conflicts with other marine users. The aim of the SafeWAVE project consists on overcoming these non-technological barriers that could hinder the future development of one of the main pillars of the EU Blue Growth strategy. Project activities includes the improvement of the current knowledge on the environmental effects and risks of WE through the collection, processing, analysis and sharing of environmental data around devices operating at sea and modelling of cumulative impacts of future larger scale WE deployments. This knowledge will serve to better inform decision-makers and managers on environmental risks, reduce environmental consenting uncertainty, the development of country-specific licensing guidance’s and suitability maps for WE

developments based on MSP decision support tools for most of the EU countries in the Atlantic Arch. Finally, a Public Education and Engagement Strategy to work collaboratively with coastal communities in France, Ireland, Portugal and Spain will be undertaken to co-develop and demonstrate a framework for education and public engagement (EPE) of MRE. The SafeWAVE Consortium, led by AZTI, includes a multidisciplinary team of partners bringing together technology device developers (BIMEP, WELLO, CORPOWER OCEAN and Geps Techno), consultants and researchers (WavEC, CTN, AZTI, RTSYS, UCC and ECN) and data managers (Hidromod), aiming to involve the wider community of ocean energy key stakeholders from across Portugal, Spain, France and Ireland.

SATHScale

Project: Engineering and upscaling of new floating renewable wind energy platform

Project duration: 01/11/2020 - 31/10/2023

Overall budget: 3.456.062 €

Renewable technologies are at the heart of the new energy system, with offshore wind representing a significant future opportunity. The Strategic Energy Technology Plan (SET Plan) states: “Wind energy is the renewable energy technology expected to provide the largest contribution to the renewable energy targets for 2020 and beyond”. In this context, setting up the fundamental conditions for future commercialisation of the SATH’s technology is necessary. However, the high levelized cost of energy (LCoE) of floating wind technology, which is still substantially above grid parity, requires significant reduction and industrialization. SATHScale project aims to address the challenge of bringing to market SATH technology through scaling-up the prototype from the technology validated and demonstrated in a relevant environment to Technology Readiness Levels (TRLs) required for commercial products in the relevant markets, i.e., to industrial readiness and maturity for market introduction, exploiting real experiences of the ongoing open-sea 2MW demonstrator that will be deployed at BiMEP (Biscay Marine Energy Platform) in Bizkaia (Spain). This challenge is expected to be solved mainly through the following factors: • Develop of industrialized fabrication system (prefabricating technology) for mass production, encompassing the manufacturing process, transportation, installation, commissioning, O&M and dismantling of the floating platform. • Design optimization from real experience data against the values obtained through conservative calculation. • Optimization of operations and maintenance logistics through data collection and analytics of real experiences of the open-sea operation of the 2MW prototype, with the consequent risk reduction of the technology innovations (de-risk), and reducing unplanned activities, improving health and safety and reducing costs. • Technology Internationalization through branches in markets with high floating wind potential.

SEA Wave

Project: Strategic Environmental Assessment of Wave energy technologies

Project duration: 01/11/2018 - 31/12/2021

Overall budget: 956.763 €

The SEA Wave project brings together technology device developers, academic experts and key stakeholders with the objective of addressing the long-term environmental concerns around the development of wave energy technology. The project will build on existing EU funded initiatives to streamline future site development and further de-risk the development of the marine renewables sector.

SIMBIOSE

Project: Sustainable Innovation in la Martinique: BIOfouling Solution for clean Energy

Project duration: 01/11/2019 - 31/10/2022

Overall budget: 1.300.927 €

Many industries use sea water in thermodynamic processes. This is particularly the case of OTEC (Ocean Thermal Energy Conversion) energy which uses the difference of temperature between warm surface seawater and cold deep seawater. Biofouling is one of the main problems faced by seawater systems and especially heat exchangers. The objectives of the project SIMBIOSE are: • to optimise the biocide dosing in order to decrease the environmental impact of the electrochlorination • to test innovative antifouling solution such as ozonation • to assess the potential of biotechnology by integration of biopolymers that could reduce the quantity of biocides. • to assess the environmental impact of all solutions • to evaluate the development of marine growth on innovative heat exchangers technologies • to extrapolate the results to a full-scale OTEC plant in order to achieve TRL9 required for the technology deployment. The overall objective is to achieve a significative CAPEX reduction for a full-scale OTEC plant of 5% by the downsizing of the antibiofouling equipment and the increase of net energy production that reduces the associated financial cost. These improvements on biofouling treatment solutions will have two positive effects: • A reduced environmental impact in a context of increasingly restrictive environmental legislation as well as a stronger awareness of the population on the necessity to protect seas and oceans, the SIMBIOSE project can contribute to a better social acceptability of technologies such as OTEC. • The solutions developed within the project will contribute to maintain heat exchangers' energy performance. To a greater extent, the solutions developed within the SIMBIOSE project will have a significative impact on the CAPEX and OPEX of OTEC plants but also opens business opportunities towards other sectors, such as the oil and gas, the naval industry, desalinisation plants, etc.

VPSTTG

Project: VPS for Tidal Turbine Generators

Project duration: 01/01/2019 - 31/12/2021

Overall budget: 1.527.594 €

VPSTTG will design, manufacture and test an improved tidal turbine's pitch system – an important component enabling technology for more cost-effective tidal energy turbines. Renewable ocean energy is key to the future of a healthy blue economy in Europe. Europe's coastline has some of the best tidal streams for tidal turbine generators to provide predictable, reliable, unobtrusive power to European residents. The development of the tidal turbine industry will not only continue to challenge other sources of renewable energy but also, if the right steps are taken, challenge the costs of conventional fossil fuel energy. As mentioned in the EU's Ocean Strategic Roadmap "Building Ocean Energy for Europe" [1] tidal stream energy is a priority area for development in order to meet the EU's goal of providing 10% of the EU's power demand from ocean energy by 2050. This project and grant is key to developing a reliable, low cost tidal turbine that can be installed in a demonstration project further reducing the LCoE (Levelized Cost of Energy) of tidal energy. The challenges in tidal power technology deployment remain intrinsically linked to its levelized cost of energy (LCoE), the reliability of technology and experience from installed capacity. Atlantis still faces a significant technical challenge in the supply of its Variable Pitching Systems (VPS). The VPS is responsible for

the safe control of the turbine's rotor speed and power generation throughout each tidal cycle, through the mechanical adjustment (pitching) of each blades' angle of attack relative to the tidal flow. This critical mechanical adjustment is achieved using the system's actuation unit, and it is this unit that is not readily available at the specification Atlantis require to withstand the highly demanding subsea environment. At present, the VPS component accounts for a disproportionate amount of the turbine capital cost, but is critical for optimum power generation and consequently, revenue. But as well as needing to make the VPS more cost effective, there is a requirement to significantly change its functionality. The Atlantis AR1500 turbine installed at MeyGen is one of the company's key enablers to increasing its global competitive advantage and is Atlantis' pilot turbine which will lead into the development of future tidal turbine demonstration projects around Europe and the world. The current design requires each turbine in an array to have a subsea cable to transmit power and communications to and from the shoreline. The Atlantis Turbines and Engineering Services (ATES) team have identified a new turbine design that would enable an array of turbines to all share one subsea cable which would drastically reduce tidal turbines LCoE - by an estimated 20%. This will be achieved by running the turbines in a fix speed mode, which means that significant cost savings can be achieved by reducing the amount of offshore cables required and much of the onshore equipment. However, to deliver this benefit the new VPS needs to deliver a pitch system optimised to provide torque control. The proposed VPS work is a key part of a significant reduction in the LCoE by enabling fixed-speed tidal turbines. This project will be designing, manufacturing and testing of one new VPS for an upgraded AR1500 turbine. It will enable Atlantis to prove to potential investors that the right steps are being taken in order to receive funding to build three turbines at the MeyGen Phase 1B demonstration project. Atlantis has partnered with Asturfeito who will manufacture, assemble and test the new VPS. With Atlantis' design and tidal experience and Asturfeito's extensive experience in delivering large technical manufacturing and machining projects the VPS project is setup to be successful. The level of knowledge and experience of both Asturfeito and Atlantis will de-risk the production of the project. The success of this project will also forward both SME's position in the global tidal and VPS market.

WaveFarm

Project: WaveRoller Wave Farm Scale-Up - Preparing to deploy the world's first commercial wave energy farm

Project duration: 01/11/2020 - 31/10/2023

Overall budget: 3.556.064 €

Wave energy is a highly valuable source of renewable power. Up to 10% of the EU's energy can be harvested from waves by 2050. To date, mainly small demonstration units have been implemented. To scale up to a mainstream technology, wave energy units must be deployed in multiple-megawatt wave farms. AW-Energy has developed, certified and demonstrated the WaveRoller, a submerged oscillating wave surge converter. A full-scale commercially-applicable WaveRoller unit was deployed in Portugal in October 2019. This project will prepare AW-Energy to deliver the world's first large-scale WaveFarm, with up to 24 integrated WaveRoller units. Two public energy companies stand ready as customers for pilot developments: in Sri Lanka (5 MW,) and Indonesia (10 MW). wave farm. These will serve as models for additional WaveFarms with up to 500 MW capacity. The deployment process will become the blueprint for WaveFarm installations globally. The project's objective is: to develop a scalable technical and commercial strategy to deploy WaveFarms. The outcomes will be: (A) Technical: (1) WaveRoller structural design adapted for WaveFarms (2) WaveFarm layout design & grid integration design complete (3) WaveFarm batch manufacturing, delivery and deployment process planned (B) Commercial: (1) Roadmap for market replication and global sales developed

(2) Business model for new lifecycle services developed (3) Template EPCM contracts, warranty and operations manuals created The impact of this project will be: - Profitability and Growth: €30M revenue from pilot projects, Cumulative €275 M by 2027. - High-Quality Job Creation: During project: 8 new jobs at AW-Energy; 15 across EU supply chain; 2 in pilot host countries. Within 5 years: 50 new jobs at company, 600 across EU, 900 in host countries. - Environmental Benefits: 273,626 Tonnes CO2 reduced by 2027. - New Market Opportunity Creation: €300 B, 200 GW potential market for wave energy. - Increased Blue Innovation Investments: €20 M in private funding.

WEDUSEA

Project: Wave Energy Demonstration at Utility Scale to Enable Arrays

Project duration: 01/09/2022 – 31/08/2026

Overall budget: 13.086.433,75 €

WEDUSEA will demonstrate a grid connected 1 MW OE35 floating wave energy converter (known as the OE Buoy) in Orkney, Scotland. This rigorous technical and environmental demonstration will happen over a two-year period in Atlantic wave conditions with outcomes directly impacting policy, technical standards, public perception and investor confidence. The project will demonstrate that the technology is on a cost reduction trajectory in line with the EU SET Plan targets and will be a stepping stone to larger commercial array scale up and further industrialization. The action will integrate sub components such as moorings and power take-offs - improving efficiency, reliability, scalability, sustainability and circularity of the technology.

WESE

Project: Wave Energy in Southern Europe

Project duration: 01/11/2018 - 31/10/2021

Overall budget: 929.606 €

The main objective of the WESE project is to contribute to increase the current knowledge on environmental impacts of Wave Energy (WE). This knowledge will better inform decision-makers and managers on environmental risks and reduce environmental consenting uncertainty of ocean wave energy projects across Europe. It will also allow for a better maritime spatial planning (MSP) approach to this nascent industry.

Useful links

Read more about how the EMFF has supported the ocean renewable energy sector: https://webgate.ec.europa.eu/maritimeforum/en/node/6868

Don’t forget to subscribe to our community on the Maritime Forum to receive updates on our project.